

Maine's Dairy Industry

Assessment of the Current Situation and Economic Impact of the Industry

Maine State Planning Office
March 2003

APPENDICES

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Table 1

Effect of Dairy Stabilization Programs on Milk Prices in Federal Order I

	Compact Over-order Class I Price (\$)	Federal Class I Zone I Price (\$)	Compact Over-order Obligation Price (\$)	Statistical Uniform Price Suffolk Co	Federal Blend Zone 21 Price (\$)	Compact Producer Price (\$)	Combined Producer Price (\$)
COMPACT PRICE/BLEND PRICE TOTAL PRODUCER PRICE JANUARY 1997- DECEMBER 1997							
97 6mo	16.94	15.00	2.04	13.81	13.09	0.93	14.02
98 avg	16.94	16.78	0.67	15.61	14.89	0.25	15.15
99 avg	16.94	16.90	1.20	14.95	14.23	0.49	14.72
00 avg	16.94	14.80	2.14	13.04	12.32	0.90	13.22
01 avg	16.94	16.25	0.40	14.90	14.18	0.13	14.31
02 avgMILC	16.94	14.26	2.68	12.64	11.92	1.21	13.13
Jan-97	N/A	14.85	N/A	13.68	12.96	N/A	12.96
Feb-97	N/A	14.58	N/A	13.57	12.85	N/A	12.85
Mar-97	N/A	15.18	N/A	13.98	13.26	N/A	13.26
Apr-97	N/A	15.70	N/A	13.96	13.24	N/A	13.24
May-97	N/A	15.73	N/A	13.77	13.05	N/A	13.05
Jun-97	N/A	14.68	N/A	13.04	12.32	N/A	12.32
Jul-97	16.94	13.94	3.00	12.69	11.97	1.28	13.25
Aug-97	16.94	13.98	2.96	12.98	12.26	1.31	13.57
Sep-97	16.94	14.10	2.84	13.26	12.54	1.36	13.90
Oct-97	16.94	15.10	1.63	14.32	13.60	0.81	14.41
Nov-97	16.94	16.03	0.91	14.82	14.10	0.44	14.54
Dec-97	16.94	16.87	0.87	14.78	14.06	0.40	14.46
Avg	16.94	15.00	2.04	13.81	13.09	0.93	14.02
Jan-98	16.94	16.20	0.74	14.74	14.02	0.34	14.36
Feb-98	16.94	16.53	0.42	15.02	14.30	0.04	14.34
Mar-98	16.94	16.49	0.45	14.82	14.10	0.16	14.26
Apr-98	16.94	16.56	0.38	14.68	13.96	0.14	14.10
May-98	16.94	16.05	0.89	14.10	13.38	0.33	13.71
Jun-98	16.94	15.25	1.69	14.40	13.68	0.71	14.39
Jul-98	16.94	14.12	2.82	13.86	13.14	1.02	14.16
Aug-98	16.94	16.34	0.60	15.72	15.00	0.24	15.24
Sep-98	16.94	18.01	0.00	17.19	16.47	0.00	16.47
Oct-98	16.94	18.23	0.00	17.48	16.76	0.00	16.76
Nov-98	16.94	18.34	0.00	17.39	16.67	0.00	16.67
Dec-98	16.94	19.28	0.00	17.90	17.18	0.00	17.18
Avg	16.94	16.78	0.67	15.61	14.89	0.25	15.14
Jan-99	16.94	20.08	0.00	18.01	17.29	0.00	17.29
Feb-99	16.94	20.58	0.00	16.54	15.82	0.00	15.82
Mar-99	16.94	19.51	0.00	16.41	15.69	0.00	15.69
Apr-99	16.94	13.51	3.43	12.48	11.76	1.43	13.19
May-99	16.94	14.86	2.08	13.14	12.42	0.82	13.24
Jun-99	16.94	15.05	1.89	13.51	12.79	0.73	13.52
Jul-99	16.94	14.50	2.44	13.69	12.97	1.01	13.98
Aug-99	16.94	14.65	2.28	14.36	13.64	0.70	14.34
Sep-99	16.94	16.83	0.11	16.06	15.34	0.21	15.55
Oct-99	16.94	19.03	0.00	16.19	15.47	0.00	15.47
Nov-99	16.94	19.50	0.00	16.13	15.41	0.00	15.41
Dec-99	16.94	14.73	2.21	12.87	12.15	1.00	13.15
Avg	16.94	16.90	1.20	14.95	14.23	0.49	14.72

Compact Over-order Class I Price (\$)	Federal Class I Zone I Price (\$)	Compact Over-order Obligation Price (\$)	Statistical Uniform Price Suffolk Co	Federal Blend Zone 21 Price (\$)	Compact Producer Price (\$)	Combined Producer Price (\$)
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Jan-00	16.94	14.15	2.79	12.35	11.63	1.21	12.84
Feb-00	16.94	13.96	2.98	12.21	11.49	1.29	12.78
Mar-00	16.94	14.09	2.85	12.39	11.67	1.23	12.90
Apr-00	16.94	14.18	2.76	12.46	11.74	1.11	12.85
May-00	16.94	14.73	2.21	12.90	12.18	0.80	12.98
Jun-00	16.94	14.95	1.99	13.25	12.53	0.80	13.33
Jul-00	16.94	15.71	1.23	13.52	12.80	0.43	13.23
Aug-00	16.94	15.20	1.74	13.39	12.67	0.91	13.58
Sep-00	16.94	15.09	1.85	13.63	12.91	0.76	13.67
Oct-00	16.94	15.14	1.80	13.32	12.60	0.74	13.34
Nov-00	16.94	15.07	1.87	13.36	12.64	0.82	13.46
Dec-00	16.94	15.38	1.56	13.72	13.00	0.65	13.65
Avg	16.94	14.80	2.14	13.04	12.32	0.90	13.22
				13.04	12.32		
Jan-01	16.94	17.24	0.00	13.76	13.04	0.00	13.04
Feb-01	16.94	15.19	1.75	13.62	12.90	0.68	13.58
Mar-01	16.94	15.90	1.04	14.50	13.78	0.39	14.17
Apr-01	16.94	16.69	0.25	15.24	14.52	0.00	14.52
May-01	16.94	17.46	0.00	16.32	15.60	0.00	15.60
Jun-01	16.94	18.24	0.00	17.08	16.36	0.00	16.36
Jul-01	16.94	18.59	0.00	17.21	16.49	0.00	16.49
Aug-01	16.94	18.65	0.00	17.53	16.81	0.00	16.81
Sep-01	16.94	18.81	0.00	17.76	17.04	0.00	17.04
Oct-01	16.94	19.18	0.00	16.04	15.32	0.00	15.32
Nov-01	16.94	19.01	0.00	15.28	14.56	0.00	14.56

MILC PROGRAM PRICE/BLEND PRICE TOTAL PRODUCER PRICE JANUARY 1997- DECEMBER 1997

Dec-01	16.94	15.23	\$1.71	13.72	13.00	0.77	13.77
Avg	16.94	17.52	0.40	15.67	14.95	0.15	15.10

2002

Jan	16.94	15.21	\$1.73	13.81	13.09	0.78	13.87
Feb	16.94	15.20	\$1.74	13.48	12.76	0.78	13.54
Mar	16.94	14.87	\$2.07	13.05	12.33	0.93	13.26
Apr	16.94	14.72	\$2.22	12.94	12.22	1.00	13.22
May	16.94	14.51	\$2.43	12.63	11.91	1.09	13.00
Jun	16.94	14.28	\$2.66	12.38	11.66	1.20	12.86
Jul	16.94	13.87	\$3.07	12.05	11.33	1.38	12.71
Aug	16.94	13.73	\$3.21	12.16	11.44	1.44	12.88
Sep	16.94	13.71	\$3.23	12.20	11.48	1.45	12.93
Oct	16.94	13.40	\$3.54	12.40	11.68	1.59	13.27
Nov	16.94	13.85	\$3.09	12.31	11.59	1.39	12.98
Dec	16.94	13.77	\$3.17	12.24	11.52	1.43	12.95
Avg	16.94	14.26	2.68	12.64	11.92	\$1.21	13.13

Note: 2002 figures are for milk produced below the 2.4 m lbs cap in the MILC program. On farms that produced over 2.4 m lbs, all milk in excess of the cap received only the blend price.

	Compact Over-order Class I Price (\$)	Federal Class I Zone I Price (\$)	Compact Over-order Obligation Price (\$)	Statistical Uniform Price Suffolk Co	Federal Blend Zone 21 Price (\$)	Compact Producer Price (\$)	Combined Producer Price (\$)
cont'd							
2003							
Jan	16.94	\$13.81	\$3.13	12.19	11.47	1.41	12.88
Feb	16.94	\$13.48	\$3.46	11.78	11.08	1.56	12.64
Mar	16.94	\$13.06	\$3.46	11.40	10.68	1.75	12.43
Apr	16.94	\$12.78	\$4.16	11.45	10.73	\$1.87	12.60
May*	16.94	\$13.01	\$3.93	11.63	10.91	\$1.77	12.68
Jun*	16.94	\$13.23	\$3.71	12.06	11.34	1.67	13.01
Jul*	16.94	\$13.69	\$3.25	12.76	12.04	1.46	13.50
Aug*	16.94	\$14.50	\$2.44	13.62	12.90	1.10	14.00
Sep*	16.94	\$15.35	\$1.59	14.48	13.76	0.72	14.48
Oct*	16.94	\$17.12	\$0.00	15.40	14.68	0	14.68
Nov*	16.94	\$17.33	\$0.00	15.49	14.77	0	14.77
Dec*	16.94	\$17.24	\$0.00	15.08	14.36	0	14.36
Avg	14.60	\$14.55	\$0.05	13.11	12.39	1.11	13.50

* 2003 prices - Table includes Agri-Mark Forecast - May-Dec.

USDA's Forecast: - for August thru December, 2003

Aug	16.94	\$14.50	\$2.44			1.10	
Sep	16.94	15.35	\$1.59			0.72	
Oct	16.94	15.00	\$1.94			0.87	
Nov	16.94	14.50	\$2.44			1.10	
Dec	16.94	14.50	\$2.44			1.10	
Avg	16.94	13.91	\$3.03			1.37	

Sources: Federal Milk Market Administrator, New England Marketing Area
www.dairycompact.org
 Agri-Mark Inc.

Table 2
Calculated Benefit of the Compact: Maine farms

	Production: Million lbs	Receipts at Blend price Zone 21	Net Gain	Total Receipts
97 avg-6mo	330.00	43,197,000	3,069,000	46,266,000
98 avg	680.00	101,252,000	1,700,000	103,020,000
99 avg	689.00	98,044,700	3,376,100	101,420,800
00 avg	668.00	82,297,600	6,012,000	88,309,600
01 avg	654.00	92,737,200	981,000	93,587,400
02 avg*	638p	76,049,600	7,696,141	83,745,741
@75%of '02	478.50	76,049,600	5,772,106	81,821,706
* if all milk qualified, no 2.4m cap				

	Production: Million lbs Monthly	Compact Over order amount (\$)	Return from Compact	Return from Blend Price	Total Receipts
NORTHEAST DAIRY COMPACT PERIOD					
1997	56.3	1.28	721,067	6,743,100	7,464,167
(last	56.3	1.31	737,967	6,906,467	7,644,433
6 mo.)	56.3	1.36	766,133	7,064,200	7,830,333
	53.7	0.81	434,700	7,298,667	7,733,367
	53.7	0.44	236,133	7,567,000	7,803,133
	53.7	0.40	214,667	7,545,533	7,760,200
			3,110,667	43,124,967	46,235,633
1998	55.0	0.34	187,000	7,711,000	7,898,000
	55.0	0.04	22,000	7,865,000	7,887,000
	55.0	0.16	88,000	7,755,000	7,843,000
	57.7	0.14	80,733	8,050,267	8,131,000
	57.7	0.33	190,300	7,715,800	7,906,100
	57.7	0.71	409,433	7,888,800	8,298,233
	58.7	1.02	598,400	7,708,800	8,307,200
	58.7	0.24	140,800	8,800,000	8,940,800
	58.7	0.00	0	9,662,400	9,662,400
	55.3	0.00	0	9,273,867	9,273,867
	55.3	0.00	0	9,224,067	9,224,067
	55.3	0.00	0	9,506,267	9,506,267
	680.0		1,716,667	101,161,267	102,877,933
1999	57.7	0.00	0	9,970,567	9,970,567
	57.7	0.00	0	9,122,867	9,122,867
	57.7	0.00	0	9,047,900	9,047,900
	59.3	1.43	848,467	6,977,600	7,826,067
	59.3	0.82	486,533	7,369,200	7,855,733
	59.3	0.73	433,133	7,588,733	8,021,867
	57.7	1.01	582,433	7,479,367	8,061,800
	57.7	0.70	403,667	7,865,733	8,269,400
	57.7	0.21	121,100	8,846,067	8,967,167
	55.0	0.00	0	8,508,500	8,508,500
	55.0	0.00	0	8,475,500	8,475,500
	55.0	1.00	550,000	6,682,500	7,232,500
	689.0		3,425,333	97,934,533	101,359,867

2000	57.0	1.21	689,700	6,629,100	7,318,800
	57.0	1.29	735,300	6,549,300	7,284,600
	57.0	1.23	701,100	6,651,900	7,353,000
	57.3	1.11	636,400	6,730,933	7,367,333
	57.3	0.80	458,667	6,983,200	7,441,867
	57.3	0.80	458,667	7,183,867	7,642,533
	55.3	0.43	237,933	7,082,667	7,320,600
	55.3	0.91	503,533	7,010,733	7,514,267
	55.3	0.76	420,533	7,143,533	7,564,067
	53.0	0.74	392,200	6,678,000	7,070,200
	53.0	0.82	434,600	6,699,200	7,133,800
	53.0	0.65	344,500	6,890,000	7,234,500
	668.0		6,013,133	82,232,433	88,245,567
2001	53.0	0.00	0	6,911,200	6,911,200
	53.0	0.68	360,400	6,837,000	7,197,400
	53.0	0.39	206,700	7,303,400	7,510,100
	55.7		0	8,082,800	8,082,800
	55.7		0	8,684,000	8,684,000
	55.7		0	9,107,067	9,107,067
	55.3		0	9,124,467	9,124,467
	55.3		0	9,301,533	9,301,533
	55.3		0	9,428,800	9,428,800
	54.0		0	8,272,800	8,272,800
	54.0		0	7,862,400	7,862,400
MILC PROGRAM PERIOD					
	54.0	0.77	415,800	7,020,000	7,435,530
	654.0		982,900	97,935,467	98,918,097
2002 <u>if applied to all milk:</u>					
164	54.7	0.78	425,580	7,155,867	7,581,447
	54.7	0.78	428,040	6,975,467	7,403,507
	54.7	0.93	509,220	6,740,400	7,249,620
171	57.0	1.00	569,430	6,965,400	7,534,830
	57.0	1.09	623,295	6,788,700	7,411,995
	57.0	1.20	682,290	6,646,200	7,328,490
164	54.7	1.38	755,220	6,193,733	6,948,953
	54.7	1.44	789,660	6,253,867	7,043,527
	54.7	1.45	794,580	6,275,733	7,070,313
157	52.3	1.59	833,670	6,112,533	6,946,203
	52.3	1.39	727,695	6,065,433	6,793,128
	52.3	1.43	748,367	6,028,800	6,777,167
	656.0		7,887,047	78,202,133	86,089,180
2003		1.41			
		1.56			
		1.75			

Table 3
Calculated Income Loss in Months below Cost of Production

	Production (m lbs)	Difference per cwt		Total Deficit	
		@ \$15 Base	@\$17 Base	@ \$15 Base	@\$17 Base
1997	330.00	0.98	2.98	3,234,000	9,834,000
1998	680.00	0.00	1.85	0	12,580,000
1999	689.00	0.28	2.28	1,929,200	15,709,200
2000	668.00	1.78	3.78	11,890,400	25,250,400
2001	654.00	0.00	2.69	0	17,592,600
2002	638.00	1.87	3.87	11,954,259	24,714,259
@25% of '02	159.50	3.08	5.08	2,988,565	8,102,600
Total loss based on 25% of milk over 2.4m in 2002:				31,996,424	113,783,059

	Production (m lbs)	Difference per cwt:		Total Income Loss	
		@ \$15 Base	@\$17 Base	@ \$15 Base	@\$17 Base
1997	56.3	1.75	3.75	985,833	2,112,500
(final	56.3	1.43	3.43	805,567	1,932,233
6 mo.)	56.3	1.10	3.10	619,667	1,746,333
	53.7	0.59	2.59	316,633	1,389,967
	53.7	0.46	2.46	246,867	1,320,200
	53.7	0.54	2.54	289,800	1,363,133
				3,264,367	9,864,367
1998	55.0	0.64	2.64	352,000	1,452,000
	55.0	0.66	2.66	363,000	1,463,000
	55.0	0.74	2.74	407,000	1,507,000
	57.7	0.90	2.90	519,000	1,672,333
	57.7	1.29	3.29	743,900	1,897,233
	57.7	0.61	2.61	351,767	1,505,100
	58.7	0.84	2.84	492,800	1,666,133
	58.7	0.00	1.76	0	1,032,533
	58.7	0.00	0.53	0	310,933
	55.3	0.00	0.24	0	132,800
	55.3	0.00	0.33	0	182,600
	55.3	0.00	0.00	0	0
				3,229,467	12,821,667
1999	57.7	0.00	0.00	0	0
	57.7	0.00	1.18	0	680,467
	57.7	0.00	1.31	0	755,433
	59.3	1.81	3.81	1,073,933	2,260,600
	59.3	1.76	3.76	1,044,267	2,230,933
	59.3	1.48	3.48	878,133	2,064,800
	57.7	1.02	3.02	588,200	1,741,533
	57.7	0.66	2.66	380,600	1,533,933
	57.7	0.00	1.45	0	836,167
	55.0	0.00	1.53	0	841,500
	55.0	0.00	1.59	0	874,500
	55.0	1.85	3.85	1,017,500	2,117,500
				4,982,633	15,937,367

Table 4

**Summary Effects of Changes in Milk Receipts to Maine Farms
Resulting from various Industry Changes**

Industry Sector: Farm Products & Agricultural, Forestry & Fishing Services
Sub-sector 1.01: Dairy Farm Products
RIIMS II (Regional Impact Model)

PART 1
Impact of Gains and Potential Gains

	<u>Total Industry</u> <u>Impact</u>	<u>Effect of Over Order Prices</u>			<u>Effect of</u> <u>LD338</u>	<u>Effect of</u> <u>Price Improvement</u>	
		<u>Total ('97-01)</u>	<u>Effect on '02 prices of:</u>			<u>to \$17cwt</u>	<u>to \$15 cwt</u>
		<u>Compact</u>	<u>Compact</u>	<u>MILC</u>			
	<u>Effect of:</u>	<u>Benefit</u>	<u>Benefit</u>	<u>Benefit</u>			
	<u>Col 1</u>	<u>Col 2</u>	<u>Col 3</u>	<u>Col 4</u>	<u>Col 5</u>	<u>Col 6</u>	<u>Col 7</u>
	<u>\$100 m</u>	<u>\$15 m</u>	<u>\$8 m</u>	<u>\$6 m</u>	<u>\$12 m</u>	<u>\$33 M</u>	<u>\$15 M</u>
<u>Final Demand Multipliers</u>							
Output Dollars (\$m)	182.440	27.366	14.595	10.946	21.893	60.205	27.366
Earnings (\$m)	44.990	6.749	3.599	2.699	5.399	14.847	6.749
Employment	5130.0	769.5	410.4	307.8	615.6	1692.9	769.500
Adjusted Employment	4576.8	686.5	366.1	274.6	549.2	1510.3	686.519
Initial Change in Output Dollars (\$m)	100.0	15.0	8.0	6.0	12.0	33.0	15.0
Total Change in Output Dollars (\$m)	282.4	42.4	22.6	16.9	33.9	93.2	42.4
<u>Direct Effect Multipliers</u>							
Earnings (\$m)		32.237	17.193	12.895	25.789	70.920	32.237
Employment		20.196	10.771	8.078	16.157	44.431	20.196
Adjusted Employment		18.018	9.610	7.207	14.414	39.640	18.018

	<u>Final Demand Multipliers</u>	<u>Output Driven Multipliers:</u>	<u>Direct Effect Multipliers</u>
Output Dollars	1.8244	1.000	-
Earnings	0.4499	0.247	2.1491
Employment	51.3	28.119	1.346
Adjusted Employment	45.8	25.1	1.2

Definitons:

Final Demand Multipliers

Output: Dollar change in output in other sectors from \$1 change in output delivered to final demand by the dairy sector.

Earnings: Dollar change in earnings of households in other sectors from \$1 change in output delivered to final demand by the dairy sector.

Employment: Total change in jobs in other sectors from \$1 m change in output delivered to final deman by the dairy sector.

Direct Effect Multipliers

Earnings: Total dollar change in household earnings employed in other sectors from \$1 change in earnings of households in the dairy industry

Employment: Total change in jobs in other sectors resulting from a change of 1 job in the dairy sector

Output Driven Multipliers

Output: Change = the actual dollars of output foregone by the affected industry.

Earnings: Final demand earnings divided by the final demand output multiplier.

Employment: Final demand employment divided by the final demand output multiplier.

Inflation adjustment = .8921623 (CPI-U, 1997-2002)

**Summary Effects of Changes in Milk Receipts to Maine Farms
Resulting from various Industry Changes**

**Industry Sector: Farm Products & Agricultural, Forestry & Fishing Services
Sub-sector 1.01: Dairy Farm Products
RIIMS II (Regional Impact Model)**

**PART 2
Impact of Losses and Potential Losses**

	<u>Total Industry Impact</u>			<u>Additional Effect of Depressed Milk Price</u> Income loss in 2002 after effect of MILC			<u>Effect of Loss of Farms:</u>		
	Effect of:	To Blend	To MILC	Total	Blend	To MILC	Various Levels of Loss:		
		<u>Below \$15</u>	2.4m lb cap		<u>Below \$17</u>	2.4m lb cap	Loss of milk receipts:		
		Col 8	Col 9	Col 10	Col 11	Col 12	Col 14	Col 15	Col 16
	<u>\$100 m</u>	<u>\$12 m</u>	<u>\$3 m</u>	<u>\$15 m</u>	<u>\$25 M</u>	<u>\$8 m</u>	<u>\$10 m</u>	<u>\$20 m</u>	<u>\$30 m</u>
<u>Output-Driven Multipliers</u>									
Output Dollars	-100.000	-12.000	3.000	-15.000	-25.000	-8.000	-10.000	-20.000	-30.000
Earnings in '97\$	-24.660	-2.959	0.740	-3.699	-6.165	-1.973	-2.466	-4.932	-7.398
Employment	-2811.9	-337.4	84.4	-421.8	-703.0	-225.0	-281.2	-562.4	-843.6
Adjusted Employment	-2508.7	-301.0	75.3	-225.8	-627.2	-200.7	-250.9	-501.7	-752.6

Column Entries:

- Col 1 Total Industry Impact, at estimated receipts of \$100 m
- Col 2 Effect of actual additional receipts of Maine Dairy Farms under the Northeast Dairy Compact
- Col 3 Additional Receipts from the Compact had it been in effect in 2002
- Col 4 Actual additional receipts of Maine farms under the Milk Income Loss Contract (MILC)
- Col 5 Effect of adding projected \$12 m to farm receipts anticipated under method proposed in LD338
- Col 6 Effect of a price increase to \$17 cwt, adding \$33m to farm receipts
- Col 7 Effect of a price increase to \$15 cwt, adding \$15 m to farm receipts
- Col 8-13 Effect of income loss due to depressed milk prices (compared at \$15 cwt and at \$17 cwt and 2.4m lb cap in MILC program)
 - 8 Loss of \$12 m from months when the Blend Price in Federal Order 1 fell below \$15 cwt
 - 9 Additional loss of \$3 m on farms whose production exceeded the 2.4 m lb production cap
 - 10 Total effect of prices below \$15 cwt
 - 11 Loss of \$25 m from months when the Blend Price in Federal Order 1 fell below \$17 cwt
 - 12 Additional loss of \$8 m on farms whose production exceeded the 2.4 m lb production cap
 - 13 Total effect of prices below \$17 cwt

Col 14-16 Effect of declines in Dairy Farm Receipts of \$10, \$20, and \$30 m

Table 5

Total Change in number of jobs by industry that results from a \$1 million change in output by the "Dairy Farm Products Industry" (RIMS II Code 1.01) in Maine in 2002 dollars

	Final Demand Multiplier	Direct Effect Multiplier
Farm and agricultural services, forestry, and fishing:		
Farm products and agricultural, forestry, and fishing services	37.3980	20.4988
Forestry and fishing products	0.0535	0.0293
Mining:		
Coal mining	0.0000	0.0000
Oil and gas extraction	0.0000	0.0000
Metal mining and nonmetallic minerals, except fuels	0.0004	0.0002
Construction:		
Construction	0.3073	0.1685
Manufacturing:		
Food and kindred products and tobacco products	0.1754	0.0961
Textile mill products	0.0298	0.0163
Apparel and other textile products	0.0354	0.0194
Paper and allied products	0.0274	0.0150
Printing and publishing	0.0933	0.0512
Chemicals, allied products and petroleum & coal products	0.0529	0.0290
Rubber, misc. plastic products, leather and leather products	0.0302	0.0166
Lumber and wood products, furniture and fixtures	0.0538	0.0295
Stone, clay, and glass products	0.0087	0.0047
Primary metal industries	0.0007	0.0004
Fabricated metal products	0.0175	0.0096
Industrial machinery and equipment	0.0137	0.0075
Electronic and other electric equipment	0.0125	0.0068
Motor vehicles and equipment	0.0018	0.0010
Other transportation equipment	0.0050	0.0027
Instruments and related products	0.0058	0.0032
Miscellaneous manufacturing industries	0.0250	0.0137
Transportation and public utilities:*		
Transportation	0.7625	0.4180
Communications	0.0689	0.0378
Electric, gas, and sanitary services	0.0805	0.0441
Wholesale and retail trade:		
Wholesale trade	0.2033	0.1114
Retail trade	0.2694	0.1477
Finance, insurance, and real estate:		
Depository and nondepository institutions, security and commodity	0.2558	0.1402
Insurance	0.2266	0.1242
Real estate	0.3328	0.1824
Services:		
Hotels, other lodging, amusement and recreation services, motion p	0.3460	0.1896
Personal services	0.1792	0.0982
Business services	0.5671	0.3108
Eating and drinking places	0.5348	0.2931
Health services	0.1742	0.0955
Miscellaneous services	0.7268	0.3984
Households:		
Households	0.0925	0.0507
Total, all other sectors:	5.6245	3.0829
Farm products and agricultural, forestry, and fishing services	37.4515	20.5281
Total, all sectors	43.0760	23.611

Source: US Dept. Of Commerce; Bureau of Economic Analysis RIMS II multipliers for Maine (1997).
Adjusted to 2002 dollars.

Table 6

Effects of Changes in Milk Receipts to Maine Farms Resulting from various Industry Changes

Industry Sector: Farm Products & Agricultural, Forestry & Fishing Services
Sub-sector 1.01: Dairy Farm Products
RIIMS II (Regional Impact Model)

Data = Total Change in number of jobs by industry that results from a \$1 million change in output
by the "Dairy Farm Products Industry" (RIIMS II Code 1.01)

PART 1

Final Demand Multipliers - Changes in output (Jobs) from Increased Farm Receipts

	Final Demand Multiplier in \$ '02	Effect of Over Order Prices			Effect of	Effect of	
		Total ('97-'01)	Effect on '02 prices of:		LD338	Price Improvement	
		Compact Benefit \$15 m	Compact \$8 m	MILC \$6 m		to \$17cwt	to \$15 cwt
	FDMultiplier				\$12 m	\$33 M	\$15 M
Farm and agricultural services, forestry, and fishing:							
Farm products and agricultural, forestry, and fishing services	37.3980	560.970	299.184	224.388	448.776	1234.135	560.970
Forestry and fishing products	0.0535	0.803	0.428	0.321	0.642	1.766	0.803
Mining:							
Coal mining	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Oil and gas extraction	0.0000	0.000	0.000	0.000	0.000	0.000	0.000
Metal mining and nonmetallic minerals, except fuels	0.0004	0.005	0.003	0.002	0.004	0.012	0.005
Construction:							
Construction	0.3073	4.610	2.459	1.844	3.688	10.143	4.610
Manufacturing:							
Food and kindred products and tobacco products	0.1754	2.631	1.403	1.052	2.105	5.788	2.631
Textile mill products	0.0298	0.447	0.238	0.179	0.358	0.983	0.447
Apparel and other textile products	0.0354	0.531	0.283	0.213	0.425	1.169	0.531
Paper and allied products	0.0274	0.411	0.219	0.164	0.329	0.904	0.411
Printing and publishing	0.0933	1.400	0.747	0.560	1.120	3.080	1.400
Chemicals, allied products and petroleum & coal products	0.0529	0.794	0.423	0.317	0.635	1.746	0.794
Rubber, misc. plastic products, leather and leather products	0.0302	0.454	0.242	0.181	0.363	0.998	0.454
Lumber and wood products, furniture and fixtures	0.0538	0.807	0.430	0.323	0.646	1.775	0.807
Stone, clay, and glass products	0.0087	0.130	0.069	0.052	0.104	0.286	0.130
Primary metal industries	0.0007	0.011	0.006	0.004	0.009	0.024	0.011
Fabricated metal products	0.0175	0.262	0.140	0.105	0.210	0.577	0.262
Industrial machinery and equipment	0.0137	0.206	0.110	0.082	0.165	0.453	0.206
Electronic and other electric equipment	0.0125	0.187	0.100	0.075	0.150	0.412	0.187
Motor vehicles and equipment	0.0018	0.027	0.014	0.011	0.021	0.059	0.027
Other transportation equipment	0.0050	0.075	0.040	0.030	0.060	0.165	0.075
Instruments and related products	0.0058	0.087	0.046	0.035	0.070	0.191	0.087
Miscellaneous manufacturing industries	0.0250	0.375	0.200	0.150	0.300	0.824	0.375
Transportation and public utilities:*							
Transportation	0.7625	11.438	6.100	4.575	9.150	25.164	11.438
Communications	0.0689	1.033	0.551	0.413	0.826	2.273	1.033
Electric, gas, and sanitary services	0.0805	1.207	0.644	0.483	0.966	2.656	1.207
Wholesale and retail trade:							
Wholesale trade	0.2033	3.050	1.627	1.220	2.440	6.710	3.050
Retail trade	0.2694	4.041	2.155	1.617	3.233	8.891	4.041
Finance, insurance, and real estate:							
Depository & nondepository institutions, security & commodity brokers	0.2558	3.837	2.046	1.535	3.069	8.441	3.837
Insurance	0.2266	3.399	1.813	1.360	2.719	7.478	3.399
Real estate	0.3328	4.992	2.662	1.997	3.993	10.982	4.992
Services:							
Hotels, other lodging, amusement, recreation services, motion pictures	0.3460	5.190	2.768	2.076	4.152	11.417	5.190
Personal services	0.1792	2.689	1.434	1.075	2.151	5.915	2.689
Business services	0.5671	8.506	4.536	3.402	6.805	18.713	8.506
Eating and drinking places	0.5348	8.021	4.278	3.209	6.417	17.647	8.021
Health services	0.1742	2.614	1.394	1.045	2.091	5.750	2.614
Miscellaneous services	0.7268	10.901	5.814	4.361	8.721	23.983	10.901
Households:							
Households	0.0925	1.388	0.740	0.555	1.110	3.053	1.388
	5.678	83.782	44.684	33.513	67.026	184.321	83.782
Farm products and agricultural, forestry, and fishing services	37.3980	560.970	299.184	224.388	448.776	1234.135	560.970
	43.076	644.752	343.868	257.901	515.802	1418.455	644.752

Source: US Dept. Of Commerce; Bureau of Economic Analysis RIIMS II multipliers for Maine (1997).
Adjusted to 2002 dollars.

**Effects of Changes in Milk Receipts to Maine Farms
Resulting from various Industry Changes**

**Industry Sector: Farm Products & Agricultural, Forestry & Fishing Services
Sub-sector 1.01: Dairy Farm Products
RIIMS II (Regional Impact Model)**

**Data = Total Change in number of jobs by industry that results from a \$1 million change in output
by the "Dairy Farm Products Industry" (RIMS II Code 1.01)**

PART 2

Output Driven Multipliers - Change in output (Jobs) from Decreases in Farm Receipts

	Output Driven Multiplier	<u>Effect of Loss of Farms: At various levels</u>		
		Loss of milk receipts:		
		<u>\$10 m</u>	<u>\$20 m</u>	<u>\$30 M</u>
Farm and agricultural services, forestry, and fishing:				
Farm products and agricultural, forestry, and fishing services	20.4988	204.988	409.976	614.964
Forestry and fishing products	0.0293	0.293	0.587	0.880
Mining:				
Coal mining	0.0000	0.000	0.000	0.000
Oil and gas extraction	0.0000	0.000	0.000	0.000
Metal mining and nonmetallic minerals, except fuels	0.0002	0.002	0.004	0.006
Construction:				
Construction	0.1685	1.685	3.369	5.054
Manufacturing:				
Food and kindred products and tobacco products	0.0961	0.961	1.923	2.884
Textile mill products	0.0163	0.163	0.327	0.490
Apparel and other textile products	0.0194	0.194	0.388	0.582
Paper and allied products	0.0150	0.150	0.300	0.450
Printing and publishing	0.0512	0.512	1.023	1.535
Chemicals, allied products and petroleum & coal products	0.0290	0.290	0.580	0.870
Rubber, misc. plastic products, leather and leather products	0.0166	0.166	0.332	0.497
Lumber and wood products, furniture and fixtures	0.0295	0.295	0.590	0.885
Stone, clay, and glass products	0.0047	0.047	0.095	0.142
Primary metal industries	0.0004	0.004	0.008	0.012
Fabricated metal products	0.0096	0.096	0.192	0.288
Industrial machinery and equipment	0.0075	0.075	0.151	0.226
Electronic and other electric equipment	0.0068	0.068	0.137	0.205
Motor vehicles and equipment	0.0010	0.010	0.020	0.029
Other transportation equipment	0.0027	0.027	0.055	0.082
Instruments and related products	0.0032	0.032	0.064	0.095
Miscellaneous manufacturing industries	0.0137	0.137	0.274	0.411
Transportation and public utilities:*				
Transportation	0.4180	4.180	8.359	12.539
Communications	0.0378	0.378	0.755	1.133
Electric, gas, and sanitary services	0.0441	0.441	0.882	1.323
Wholesale and retail trade:				
Wholesale trade	0.1114	1.114	2.229	3.343
Retail trade	0.1477	1.477	2.954	4.430
Finance, insurance, and real estate:				
Depository & nondepository institutions, security & commodity brokers	0.1402	1.402	2.804	4.206
Insurance	0.1242	1.242	2.484	3.726
Real estate	0.1824	1.824	3.648	5.472
Services:				
Hotels, other lodging, amusement, recreation services, motion pictures	0.1896	1.896	3.793	5.689
Personal services	0.0982	0.982	1.965	2.947
Business services	0.3108	3.108	6.216	9.325
Eating and drinking places	0.2931	2.931	5.862	8.794
Health services	0.0955	0.955	1.910	2.865
Miscellaneous services	0.3984	3.984	7.967	11.951
Households:				
Households	0.0507	0.507	1.014	1.521
	3.1122	31.122	62.245	93.367
Farm products and agricultural, forestry, and fishing services	20.4988	204.988	409.976	614.964
	23.6111	236.111	472.221	708.332

Source: US Dept. Of Commerce; Bureau of Economic Analysis RIMS II multipliers for Maine (1997).
Adjusted to 2002 dollars.

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Northeast Dairy Compact Commission

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